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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,236	01/15/2002	Dimitar V. Dimitrov	169.12-0526	6372
164	7590	12/30/2004		
KINNEY & LANGE, P.A. THE KINNEY & LANGE BUILDING 312 SOUTH THIRD STREET MINNEAPOLIS, MN 55415-1002				
EXAMINER TUGBANG, ANTHONY D				
ART UNIT		PAPER NUMBER		
3729				

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/050,236

Applicant(s)

DIMITROV ET AL.

Examiner

A. Dexter Tugbang

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) 9-20 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Pri rity under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/16/02, 10/29/02.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, Claims 1-8 in the reply filed on 10/6/04 is acknowledged. The traversal is on the ground(s) that the inventions are not distinct, at least for the reasons that all of the inventions "define a stripe height back edge". This is not found persuasive because Group I is still considered to be separately usable process relative to Group II because Group I requires separate and distinct steps of defining a stripe height back edge and defining a reader width that are not interconnected with either the patterning steps in Group II, or with the patterning steps of Claims 2 or 3. For example in Claims 2 and 3 of Group I, there is no nexus between the patterning steps with the use of the first and second photoresist layers and the definition steps of the stripe height back edge and the reader width. In Group II, other than the selective patterning steps, there is no separate steps of defining a stripe height back edge and defining a reader width. So the examiner's position is that the inventions are separate, distinct, require different lines of patentability and would require the application of different art. All of these factors taken into consideration would place a burden on the examiner to search and examine all of the inventions. Therefore, the requirement is still deemed proper and is therefore made FINAL.

2. Claims 9-20 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/6/04.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because the language of the abstract uses implied phrases, i.e. "The present invention..." (line 4, page 11 of specification). Correction is required. See MPEP § 608.01(b).

Drawings

5. The drawings were received on 10/6/04. The drawings, i.e. Figure 3, have been approved by the examiner.

Claim Objections

6. Claims 2 and 3 are objected to because of the following informalities.

In Claim 2, the phrases of "a stripe" (line 1) and "a magnetoresistive" (line 2) should be replaced with --the stripe-- and --the magnetoresistive--, respectively.

In Claim 3, the phrase of "a reader" (line 1) should be replaced with --the reader--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin et al 6,262,869.

Lin discloses a method of forming a magnetoresistive reader comprising: defining a stripe height back edge (back edge of the top surface of 312 in Fig. 19G) of a magnetoresistive sensor of the magnetoresistive reader; and then defining a reader width of the magnetoresistive sensor (see sequence of Figures 19H-19I).

Regarding Claim(s) 2-3, Lin further teaches: depositing magnetoresistive sensor layers (302, 304, 306, 308, 310, 312); selective patterning a first photoresist layer 364 on the sensor layers, the first photoresist layer leaving an exposed first region (region to the right of 364 in Fig. 19H) of the magnetoresistive sensor layers; selective patterning a second photoresist layer 362 on the sensor layers, the second photoresist layer leaving an exposed second region (region to the left of 362 in Fig. 19H) of the magnetoresistive sensor layers; and removing the exposed first region and exposed second region of the magnetoresistive sensor layers.

Regarding Claim(s) 4, the front edge of the top surface of 312 in Fig. 19G is read as the “stripe height front edge” that is defined.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al in view of Hiner et al 6,032,353.

Lin discloses the claimed manufacturing method as relied upon above in Claims 1-4.

Line does not appear to mention that the air bearing surface ABS is lapped.

Hiner suggests that lapping the ABS provides a smooth surface during operation of the magnetoresistive head (see col. 7, lines 5-8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of Lin by adding the step of lapping, as taught by Lin, to positively providing an ABS with a smooth surface during operation.

11. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al in view of Gill et al 6,055,136.

Lin discloses the claimed manufacturing method as relied upon above in Claims 1-4, further including depositing current contacts 340, 342, forming a gap layer 78 and forming a top shield layer 82, where the current contacts are substantially level and the top shield is substantially planar (see Figs. 6 and 7). Line does not appear to mention as to whether or not the gap layer and shield layer are deposited.

Art Unit: 3729

Gill shows that it is known to form a gap layer 53 by depositing and form a top shield layer 55 by depositing (see col. 4, lines 40-53), all of which is an alternative means to pattern the gap and shield layers.

It would have been obvious to one of ordinary skill in the art at the time the invention was made have modified the method of Lin by depositing the gap and top shield layers, as taught by Gill, to positively provide an alternative means to both form and pattern the gap and shield layers.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

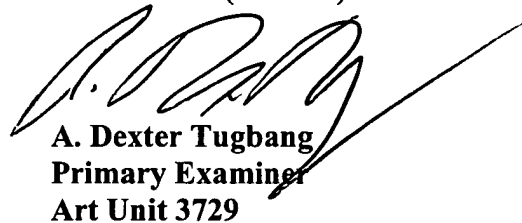
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570.

The examiner can normally be reached on Monday - Friday 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3729

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



A. Dexter Tugbang
Primary Examiner
Art Unit 3729

December 27, 2004